

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A computer-implemented method for indicating, on a computer display, the values of variables in a software program under development, the computer-implemented method comprising:

detecting the position of a pointer on the computer display associated with an expression in a listing of the program under development;

reading and evaluating the expression in the listing;

displaying a first item value in a first item window on the computer display, wherein the item value is associated with a variable in the expression, wherein an expansion widget indicator of at least one sub-item value associated with the variable is displayed along with the first item value in the first window; and

responding to a pointer request for a first sub-item value by displaying a first sub-item window on the computer display containing the first sub-item value, wherein the first item value in the first item window is related to the first sub-item value in the first sub-item window, wherein the relationship between the first item value and the first sub-item value is a parent to child relationship, wherein the first sub-item window is separate from the first item window on the computer display, and wherein the first item window and the first sub-item window are displayed simultaneously and overlay at least a portion of the listing of the program under development.

2. (Original) The method of claim 1, wherein, the first item value remains visible when the first sub-item value is displayed, the displayed first sub-item value being accommodated to fit within a limited screen size by the use of at least one scroll control present in the first sub-item window.

3. (Original) The method of claim 1, further comprising:

responding to a pointer request for a second sub-item value by displaying a second sub-item window containing second sub-item values.

4. (Original) The method of claim 3, wherein the pointer request for a second sub-item value dismisses the first sub-item window before displaying the second sub-item window.
5. (Previously Presented) The method of claim 1, further comprising:
allowing the first item window and the first sub-item window to become transparent upon request, wherein displayed information can be viewed during transparency of the first item and first sub-item windows without dismissing the first item and first sub-item windows, and wherein the transparency can be reversed upon request to again view the first item and first sub-item windows.
6. (Original) The method of claim 1, further comprising:
displaying a menu of operations that can be conducted to alter one or more of format and value of a variable being viewed.
7. (Original) The method of claim 6, wherein the format of a variable being viewed comprises one of simple text, hexadecimal, binary, decimal, text, HTML, XML, and custom editor/viewer.
8. (Previously Presented) A method of displaying related data sub-items corresponding to a cursor-selected object displayed on a computer screen, the method comprising:
determining that a cursor is positioned to point at the cursor-selected object on the computer screen, wherein the cursor-selected object is an object in a listing of program code under development;
loading the cursor-selected object;
evaluating the cursor-selected object to determine if the cursor-selected object:
has a variable value;
has related data sub-items; and
if the related data sub-items are capable of expansion into lower-tier sub-items;
assembling values for the cursor-selected object and the related data sub-items; and

displaying on the computer screen the values of the cursor-selected object in a first display window along with an expansion widget indicator of the related data sub-items, the display also including the lower-tier sub-items in a second display window, the first and second display windows displayed simultaneously and overlaying at least a portion of the listing of the program code under development, wherein the cursor-selected object and the related data sub-items are related in a parent and child relationship.

9. (Original) The method of claim 8, wherein evaluating the cursor-selected object further comprises evaluating an expression associated with the cursor-selected object.

10. (Original) The method of claim 8, wherein displaying the values of the cursor-selected items and related sub-items further comprises displaying a variable associated with the cursor-selected object and values of the variables respectively.

11. (Previously Presented) The method of claim 8, wherein the indication of a presence of the lower-tier sub-items is a symbol to indicate that lower-tier sub-items exist and can be selected for display.

12. (Previously Presented) The method of claim 8, further comprising allowing the displayed values to become temporarily transparent allowing visual examination of underlying displayed information without dismissing the first and second display windows.

13. (Previously Presented) A system for displaying data tips related to a cursor-selected object displayed on a computer screen, the system comprising:

a computer screen to display a cursor-selected object and the data tips;

a processor for executing instructions corresponding to the method of:

determining that a cursor is positioned to point at the cursor-selected object on the computer screen, wherein the cursor-selected object is an object in a listing of program code under development;

loading and evaluating the cursor-selected object to determine if the cursor-selected object:

has a variable value;
has related data sub-items; and
if the related data sub-items are capable of expansion into lower-tier sub-items;
assembling values for the cursor-selected object and the related data sub-items; and
displaying the values of the cursor-selected object in the data tips using a first window located adjacent to the cursor selected object, displaying the related data sub-items in a second window, wherein the cursor selected object and the related data sub-items are related in a parent and child relationship, the second window having an expansion widget indication of the lower-tier sub items if the lower-tier sub-items exist, wherein the expansion widget indication of the lower-tier sub-items is a symbol to indicate that lower-tier sub-items exist and can be selected for display in a third window simultaneously with the first and second window, and wherein the first window and the second window overlay at least a portion of the listing of the program code under development.

14. (Previously Presented) The system of claim 13, wherein evaluating the cursor-selected object further comprises evaluating an expression associated with the cursor-selected object.

15. (Previously Presented) The system of claim 13, wherein displaying the values of the cursor-selected object further comprises displaying a variable associated with the cursor-selected object and values of the variables.

16. (Cancelled)

17. (Previously Presented) The system of claim 13, wherein the data tip window becomes temporarily transparent upon request allowing visual examination of underlying displayed information without dismissing the data tip window.

18. (Previously Presented) A machine-readable storage medium having instructions therein, executable by a machine to perform a method comprising:

determining that a cursor on a computer screen is positioned to point at the cursor-selected object on the computer screen, wherein the cursor-selected object is an object in a listing of program code under development;

loading the cursor-selected object;

evaluating the cursor-selected object to determine if the cursor-selected object:

has a variable value;

has related data sub-items; and

if the related data sub-items are capable of expansion into lower-tier sub-items;

assembling values for the cursor-selected object and the related data sub-items, wherein the cursor-selected object and the related data sub-items are related in a parent and child relationship; and

displaying on the computer screen the values of the cursor-selected object in a first display window along with an expansion widget indicator of the related data sub-items, the display also including the lower-tier sub-items in a second display window, the first and second display windows displayed simultaneously and overlay at least a portion of the listing of the program code under development.

19. (Previously Presented) The method of claim 1, further comprising:

displaying a menu of operations to be performed on the first sub-item, the operations comprising editing a value of the first sub-item value.

20. (Previously Presented) The system of claim 13, further comprising:

displaying a menu of operations to be performed on the lower-tier sub-items, the operations comprising editing a value of the first sub-item value.